Conclusion by the Scientific Committee

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CONCLUSION

by the Scientific Committee

Some tracks in the formulation of « integrated » management plans in mountain forests

The confrontation between the theoretical and methodological reflections of the scientists from a part, and the experiences realised in an empirical way by the managers from another part, lead to some conclusions for the future development of integrated management plans in mountain forests.

"Ecosystem management" as the new paradigm?

First of all, balancing and integrating economic, ecological and social considerations in using forest resources is an important basis for forest sustainable development, and may even be considered as one of the main challenges of the modern forestry management as derived from the international dialogue on forests.

At a local level of decision making, where various actors are concerned and no management objective appears as exclusive or dominant, there is a need for an approach able to integrate all the various components in the decision making process, in order to get as many benefits as possible, within acceptable limits of social and environmental impacts, and with minimum conflict and cost.

As the integration of ecological, economic and social principles to manage biological and physical forestry systems in a manner that safeguards the ecological sustainability, natural diversity and productivity of the landscape, "ecosystem management" may be one of the major answers to the problem raised .

"Ecosystem management" is clearly a complex and interdisciplinary type of management that needs good monitoring and relevant scientific contributions. It can be used for integration of ecological, social and economic considerations in management planning, addressing the following issues:

- achieving agreement on the problems, issues, questions and goals, including consideration of different ecological, economic and social points of views and interests;
- bringing together existing information about managed as well as unmanaged resources in the management unit, including the processes and interactions within and between the ecosystems;
- linking together small scale (site level) and large-scale (landscape level) issues;

- deciding on a course of action only after having evaluated the possible ecological, economic, and social impacts and possible side effects of the foreseen manipulations on the considered ecosystem, on the adjoining ecosystems and on the whole managed unit over time;
- recognising the middle and long term consequences of planned short term actions;
- linking managers, policy makers, scientists and the public.

Ecosystem management provides both a philosophy and a framework guiding the concrete action, and may result in re-introducing self-regulating mechanisms in mountain forest management. In America, where it was initiated, it has brought some changes in the philosophy of forest management. The situation in Europe is rather different, because there exist many elements in the present forestry practices already dealing with the integration of ecological, economic and social aspects. But there is a need for a more comprehensive and holistic rigorous conceptual approach.

Mixed models are required

In addition, the formulation of integrated forest management plans in mountain regions which can give benefit to biggest possible number of people, requires rigorous approaches.

In most of the cases, the definition of multipurpose objectives and means remains as a major task of the public authority, but it results from a permanent confrontation with various stakeholders, and it may change over time depending upon the evolution of the context.

The formulation of integrated management plans in mountain areas requires taking into consideration the various aspects of the process of decision making, referring to various theories and conceptual frameworks.

The above stated leads to the necessity to apply methodologies able to integrate rationalist, communicative and adaptive approaches to forest management.

The rationalist frame, useful for the decision makers in order to improve the rigour of the procedures, consecutively includes:

- an analysis of the present situation and issues;
- a structuring of various objectives of the plan;
- the definition of strategies and measures to be implemented in order to achieve those objectives.

The communicative approach is constituted with the processes of involvement of the stakeholders, aiming at building concrete partnership among the various actors, based on clear engagement and share of risks and benefits of the management options retained.

It should include a real negotiation, as all the actions are not possible to be carried out with the existing means, multi-beneficiaries management schemes and measures to be implemented through multi-facet partnership fixing consensus.

The implementation of an adaptive management is based on procedures of direct immediate follow-up giving the rationale for decision in time, considering the changes occurring in the surrounding conditions.

There are different ways to combine these various aspects in the construction of the decision.

A mixed model necessarily brings compromising solutions balancing competing social needs and interests, and automatically promotes derived from a process of construction of the issue to be addressed.

The need for mixed models is particularly adapted to public decision making in mountain forests, where demands from various stakeholders are numerous and problems urgent to be solved.

Building decision through involvement and negotiation

In the future, actions will not be based only on norms defined globally and to be applied locally, they will be more or less directly coming from the expression of social demands.

The process of building the issue is to be as complete and rigorous as possible.

This means the following aspects for the formulation of integrated management plans in mountain areas:

- the formulation of the integrated management plans need to be based on the association of various stakeholders, for the definition of a common and multi-facet decision;
- the participation of stakeholders is considered as significant in a process of management planning at the local level only if the results consist in the definition of a stated partnership among some of the actors in order to carry out specific tasks and actions, through sharing benefits and risks of the related actions;
- a participation of both organised (the stakeholders) and non organised (the public) interests is absolutely needed;
- this may occur only if there is a transparent procedure for negotiation and conflict resolution, aiming at the definition of a compromise for the goals, to be translated in a consensus for acting;
- this may be effective as a process of decision making only in some framework conditions are met: adequate data and knowledge, not to discuss about vague issues (the plan itself may be used as a tool for communication); accurate and timely analysis and decisions, in order to respect planning requirements and operational management; adequate resource funding for implementing the decisions resulting from a consensus; clear stated political issues and formulated agenda; roles and responsibilities well defined and assumed by all parties and individuals involved (not only individually but for the group as a whole).

The procedures for involvement of participants need to be directly linked to the decision making, and applied at each step of the whole process of formulation and implementation of the management plans.

In the course of such a process, the discussion and negotiation are permanently provided with results and proposals coming from experts' studies aiming at optimum solutions.

A need for an adaptive management

Especially in the mountain areas, characterised with very fragile forest ecosystems and subject to natural hazards, management at any level is to be conceived as resilient to changes in the ecological and socio-economic context.

This is the reason why a sustainable forest management in mountain regions can only come from adaptive management.

The introduction of adaptive management requires the following characteristics:

- an integrated management plan is conceived as a programme including a set of relations among stakeholders, to be adaptable depending upon the evolving situation through an inductive and iterative process of discussion involving the various participants; it is not a systematic shopping list of objectives to be reached or of concrete actions to be carried out, as a unique quantified goal in a pre-defined time frame;
- at least for some important issues, but more fruitfully for most of the aspects to be treated, such a plan should include a clear agreement for a multi-facet partnership between the various participants for carrying out concrete actions in a co-operative way;
- an integrated management plan does not attribute definitive functions or utilities in the territory in a fixed manner, but creates defined and accepted mechanisms in order to get the right balance between different uses able to be modified in case new aspects emerge;
- such a plan includes a permanent communicative follow-up by all actors, with new types of indicators and methods, and not only an end-course technical evaluation.

Think Small, Act Long Term

Integrated forest management naturally links people with places. A "place-based" approach to thinking about forests, people, human needs, and forest functions focuses attention on small areas defined by patterns of living. Scientific understandings of forests, forest functions, and society look at elements that are common to many places, defined in terms of questions of scientific interests, and placed in framework of explanation based upon abstract theories. Local knowledge of forests links the everyday patterns of social life to the nature of the forest, its specificity, its location, its dynamics, and its disturbances. A communicative approach can begin to bridge these two forms of knowledge, however, if management actions are conceived in terms of abstract goals and theories, they will not be likely to fit with localised knowledge and needs. Therefore, when local people provide the initial framing of both problems and possible solutions, experts can contribute by helping to search for ways to bring scientific knowledge or lessons from other places to the definition of a feasible solution.

By thinking small, integrated management plans can become understandable visions and interpretations of people, forests, and future possibilities. To some extent, the small scale can be linked to larger, regional, scales of forest management. However, the most significant change is that the top-down approach used to allocate forest functions and uses based upon expertise or abstract interests cannot continue.

Rather, a complex tapestry of localised, place-based, integrated management plans provides a rich diversity of ways of living, using, and protecting the forest.

Does this place-based approach mean that national or regional level forest policy is impossible? From the papers in this conference the answer is definitely no. A general forest policy that sets for broad objectives, general limits on some behaviors (like harvesting close to mountain streams), and reflects a common understanding of the place of mountain forests in the world, nation, region and locality is essential. This kind of policy framework allows acting in the long term within place-based communicative management planning processes. Some kinds of overarching objectives need to be meet in small places, like maintaining protection forest areas. This kind of relationship between policy and practice, however, is different than allocating forest areas to different uses based upon abstract notions of what kinds of uses might be provided by forests in different areas irrespective of how people use or think about these forests.

The promise of an ecosystem management approach is that the primary management goal is to maintain the productive capacity of the land -ecological sustainability- over the long term. This means focusing on what remains on the land, not just what is taken from it in products. For people living in a place, what remains in the forest is often the most important to them. The products that leave the land -timber, special forest products like mushrooms and truffles- link economic relationships to forests. But the "products" that remain on the land -pasture grasses, scenic beauty, forests for protection and water production, and so on- sustain their ways of life. Thus, engaging people in a communicative process is an essential element of ecosystem management.

Remember: planning is a journey of action

One very clear lesson from the papers in this research course was the focus on action as the essence of planning. If forest planning begins with a statement of objectives and ends with the publication of a "plan" document, then it is simply an exercise. Planning means thinking about what problems need to be addressed, who needs to address them, what information is needed to understand both problems and potential solutions, trying out possible solutions to see if they work, if not, trying again.

When action is understood as the key element of planning, then the process begins with what kinds of actions are needed and who needs to undertake these actions? This framework automatically links what needs to be done with who has the capacity to do it. In many developing countries, we learned, this process begins in the communities with small groups of people concerned with very specific problems.

By identifying what kinds of action are needed (clean water or forest regeneration), it is possible to seek out who as the capacity to do the needed activities. In most cases, local people have some of the capacities and need very specific assistance, like technical information and access to funds or resources.

Again, this approach reframes the traditional rationalist approach to planning. Whereas in the rationalist approach, goals are given by abstract models and economic or other objectives, in this bottom up approach, goals are created from common needs and objectives result from the tasks necessary to meet these needs. From the perspective of integration forest management, integration is the natural

outcome of meeting human needs and ensuring the long-term sustainability of forests to meet these needs. The abstract ideas of "functionality" are replaced by concrete understandings of who are the beneficiaries and which parties are responsible for what actions. This localised, communicative, place-based approach to integrated forest management requires adequate technical information and support of experts. However, both science and expertise serve the interests of the beneficiaries, instead of determining what these interests should be based on abstract models and interests.

The technical debate among scientists and practitioners, initiated by EOMF in Pralognan La Vanoise in June 2000 and continued through the research course of Bardonecchia in July 2002, certainly is not closed yet, because these strategic directions remain very general and open.

Many questions are still to be answered.

Some further theoretical and empirical developments are required in order to give more coherence and rigour to the actions to be promoted in the field of integrated forest management of mountain forests.

Among these, the following lines may be mentioned:

- how to translate ecosystem management principles in technical norms for guiding practitioners;
- how to conceive mixed models taking into account the need for an adaptive management;
- how to define processes and procedures of integration working at different scales of time and space;
- how to integrate forest management into environmental considerations and rural development;
- how to balance the various utilities in case of conflicting propositions for forestry development;
- how to maintain the link between the different levels of planning documents: national/regional forest programmes, integrated forest management plans at local level, management plans at the level of the management unit.

For those issues, a promising way consists in confronting theoretical and methodological considerations to empirical experiments.

The discussion on integration in the management of mountain forests will certainly continue in the future, associating scientists, managers, and also policy decision makers, in order to progress in the promotion of this shared vision of how coordinated actions for a sustainable management of the mountain forests can be set up.